

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>10002994W001</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, Item 5 below.	
International application No. <b>PCT/JP2004/011529</b>	International filing date (day/month/year) <b>04/08/2004</b>	(Earliest) Priority Date (day/month/year) <b>11/08/2003</b>
Applicant  <b>CANON KABUSHIKI KAISHA</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

**4. With regard to the title,**

- ☒ the text is approved as submitted by the applicant.  
☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

- ☐ the text is approved as submitted by the applicant.  
☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regards to the drawings,**

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1

- ☒ as suggested by the applicant.  
☐ as selected by this Authority, because the applicant failed to suggest a figure.  
☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/011529

## Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A sensor which has high measuring sensitivity and is excellent in response is provided by forming a porous film (106) in a sensitive section of a field-effect transistor. It comprises a porous body, which is formed on a sensitive section (here, a gate insulating film (104)) of the field-effect transistor and has cylindrical pores (195) which are formed almost perpendicularly to a substrate, and the field-effect transistor. It uses as a porous film a porous film which is made of a semiconductor material whose main component (except oxygen) is silicon, germanium, or a composite of silicon and germanium, or a porous film made of an insulation material whose main component is silicon oxide, which has pores perpendicular to the substrate.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/011529

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N27/414 H01L29/772

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC, COMPENDEX, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PATENT ABSTRACTS OF JAPAN vol. 0123, no. 29 (P-754), 7 September 1988 (1988-09-07) & JP 63 090754 A (TOSHIBA CORP), 21 April 1988 (1988-04-21) abstract	1-6, 10, 11
Y,P	US 2004/043208 A1 (FUKUTANI KAZUHIKO ET AL) 4 March 2004 (2004-03-04) paragraphs '0001! - '0026!, '0072! - '0122!, '0166! - '0172!	1-6, 10, 11
A	US 5 874 047 A (FROHNHOFF STEPHAN ET AL) 23 February 1999 (1999-02-23) figure 3 column 2, line 10 - line 65 column 7, line 9 - line 49 ----- -/--	1-11



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*S\* document member of the same patent family

Date of the actual completion of the international search

8 October 2004

Date of mailing of the international search report

22/10/2004

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/011529

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/020060 A1 (DEN TOHRU ET AL) 30 January 2003 (2003-01-30) the whole document -----	1-11
A	HUCZKO A: "TEMPLATE-BASED SYNTHESIS OF NANOMATERIALS" APPLIED PHYSICS A: MATERIALS SCIENCE AND PROCESSING, SPRINGER VERLAG, BERLIN, DE, vol. A70, no. 4, April 2000 (2000-04), pages 365-376, XP001004473 ISSN: 0947-8396 paragraph '0003! -----	1-11
A,P	WO 03/069677 A (FUKUTANI KAZUHIKO ; DEN TOHRU (JP); CANON KK (JP)) 21 August 2003 (2003-08-21) the whole document -----	1-11
A	US 2002/034646 A1 (CANHAM LEIGH T) 21 March 2002 (2002-03-21) paragraph '0096! -----	1-11

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/011529

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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